STRATEGY RESEARCH PROJECT

THE ARMY PREPOSITION AFLOAT PROGRAM: ARE WE THERE YET?

BY

LIEUTENANT COLONEL MICHAEL S. TUCKER
United States Army

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LTC Michael S. Tucker

Colonel Mike Cole
Project Advisor

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U.S. Army War College
Carlisle Barracks, Pennsylvania 17013

ABSTRACT

AUTHOR: MICHAEL S. TUCKER, LTC, US ARMY

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The Army's Pre-positioned Afloat (APA) fleet, known by military planners as Army Pre-positioned Stocks (APS-3), performs a key role in the nation's power projection strategy. Budgeting for this program is measured in billions of dollars—and it will undoubtedly be funded and maintained beyond the year 2010. As a key component of the nation's deterrence strategy, and an essential element of the nation's strategic mobility triad, APA is here to stay. Units assigned contingency missions must draw equipment from Army Pre-positioned Afloat, but they have little to no prior visibility of the equipment which they may draw in a theater of war. Wholesale systems designed to maintain accurate inventories of the equipment are less than perfect; they simply do not offer the fidelity required for warfighting commanders who plan for deployment. Because of this uncertainty, the Army must become better acquainted with APS-3 and integrate APA training into annual training calendars. In the long term, the Army must foster an on-going partnership between APS planners and analysts, on one hand, and warfighting commanders and staffs, on the other.

APS planners and analysts need to understand the warfighting
business as much as the warfighter needs to know the APS
business.

This study provides a critical look into this program and
offers solutions to provide warfighting commanders and APS
planners with the level of detail necessary to plan and execute
the CINC's military strategy. U.S. military history is laden
with examples of poor logistical deployment planning. We must
learn from such experiences, lest we repeat the past.

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WHY THIS PAPER?

> Much like seats at a ball game, your perspective in a
> given situation depends on where you sit, and what you
> see.
>
> — General Fred Franks Jr. (Ret)

Having just arrived from a successful, yet tiring, rotation at the National Training Center, we were met at the airfield by the Brigade Operations Officer who, during the short ride back to the Army post, briefed the brigade's leadership on the division's upcoming deployment to Kuwait. The deployment came in response to Saddam's latest spat with the United Nation's Inspection Team and the division's advance party had already departed.

Our brigade was designated as Force Package Two, which meant that we would draw equipment from the APS-3, a heavy brigade of equipment with all combat support and combat service support afloat in twelve ships. The next few days—even the ensuing weeks—held for me a revelation that I will never forget. What seemed to be the most simple of questions quickly became million dollar queries as we began the process of educating ourselves on what we did not know about APS-3.

What type of mortars are loaded on the ships? 4.2" or 120mm? Do the vehicles come with Basic Issue Items? Are they complete? What major end items are missing? For example, are all the water trailers on board? Are they serviceable? What about Sets, Kits,

and Outfits? What is their status? Are they serviceable and 100 percent complete? What is the status of the communication equipment: Is it Vehicular Intercom-1 (VIC-1), or VIC-3? What about the installation kits? Do we need to take ours? Is there diagnostic equipment also? Are all of the vehicles fully mission capable (FMC)? If not, what repair parts should we take with us?

With pressure from airlift planners to specify how many pallets of "To Accompany Troops" (TAT) we required, it was difficult to determine what we should take besides individual equipment. Needless to say, we erred on the safe side and palletized practically everything imaginable.

These logistical questions are critical to a commander who is well into the execution of the deployment phase of an operation. Yet such logistical uncertainty must be resolved lest a less wary commander at some port overseas discovers too late that his sanguine assumptions were way off the mark. Then there will be little time to deal with such problems.

Our cries for information were met with noble attempts of various agencies to find answers during the unanticipated delay in deployment. But one thing became very evident: There was no existing "system" to provide such information. Even more importantly, there was no excuse for such uncertainty.

This study critically examines the Pre-positioned Afloat Program from the user's perspective. Its recommendations are formulated to provide warfighting commanders and APS planners

with the detail necessary to plan and execute the CINC's military strategy.

Before we discuss the current status of APS-3, let's take a brief look at the genesis of this key link in our nation's Strategic Mobility Triad (Airlift, Sealift, and Prepositioned Equipment), noting why it is so important to our National Security Strategy.

POST-COLD WAR BEGINNINGS

The Army's Pre-positioned Afloat Program (APA), known by logisticians and war planners as APS-3, was born out of necessity as a post-Cold War draw-down removed the Army's forward presence from Europe. The lessons learned from Desert Storm; the bold shift from a forward-presence, threat-based strategy to a CONUS capability-based strategy; and the disappearance of a bi-polar world presented new threats which were asymmetrical and required increased response time. Our National Security Strategy of Prepare, Shape, and Respond then emerged as the foundation of our current National Military Strategy.

Focusing on these three strategic concepts, the Army sought ways to reduce response time and rapidly build robust combat power tailorable to a myriad of threat levels. It was Pre-positioned equipment afloat which provided the means to execute the new strategy. But this study reveals that there is much more to this program than just storing tanks and trucks on ships.

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LESSONS FROM THE GULF WAR

Desert Storm revealed significant deficiencies in the military's ability to project heavy forces into a theater in a timely manner. During the pre-Gulf War period, the Army's first prepositoned-afloat fleet consisted of four ships used primarily for transporting ammunition and port handling equipment. The Marines, on the other hand, had developed a Maritime Pre-positioning Force (MPF) as early as 1979; it consisted of 13 ships organized into three squadrons (MPSRON's). In 1990, the Marine prepositioning-afloat concept was validated when the MPF provided the first heavy armored capability during Desert Shield.[1]

Noting this success, the Office of the Joint Chiefs of Staff (JCS) began reassessing U.S. mobility forces. In their 1992 Mobility Requirements Study (MRS), the JCS proposed new airlift and sealift forces, recommending that the Army preposition sets of heavy equipment on board ships staged close to potential trouble spots.

This study revealed that neither our current nor our future ability to strategically project power proved adequate to meet the demands of the National Security Strategy. To address the MRS, the Army initiated the Army Strategic Mobility Program (ASMP), which concluded that new sealift and airlift alone could not sufficiently increase its deployability to meet our strategic

objectives. AMSP thus indicated that pre-positioned equipment afloat would be required as well. The ASMP Action Plan was published in March 1993. It prompted the Army to develop the capability to provide a corps size force of 5.5 Divisions at C+75.[2]

The following doctrine indicates the importance of APS-3 in this force projection-crisis response strategy:

- *A light or airborne brigade-size force to be inserted into theater by C+4, with the remainder of the division to close not later than C+12. The force including its personnel, equipment and logistical support structure [will] be transported by air.*

- *An afloat heavy combat brigade with support to close into the theater, and be ready to fight not later than C+15. The APA brigade force [will] be a 2X2 heavy brigade: two armored, two mechanized battalions plus support. APA also provides theater-opening CS/CSS units and sustainment stocks for the thirty days of contingency. This force [will] be organized into force modules tailored to meet the CINC's needs.*

- *By C+30, two heavy divisions – a mix of mechanized infantry, armored, or air assault forces, depending on the theater commander's priorities, including the logistical support structure – [will] close in theater. The equipment for the heavy force [will] transit by sealift.*

- *The remaining force – two divisions and support [will] close by C+75.*

—FM 100-17-1

While the Marines had been maintaining their MPF for over ten years, the Army was new to this type of mission and had much to learn. Further, the USMC mission is expeditionary in nature,

designed to conduct forced-entry operations if necessary.[3]
Unlike the Army, the USMC aligns their MPF with specific
regiments that routinely train with the MPF and are thus very
familiar with its inventory.[4]

Based on the MPF concept, the Army's pre-positioned fleet
is designed to allow for the rapid deployment and employment of
an Army heavy brigade into secured ports in an Area of
Operations.[5] This capability provides the Combatant Commander
with the flexibility to reinforce and enhance an established
lodgment, while providing initial sustainment of deploying
contingency forces.[6]

Essentially, the APA minimizes initial strategic sealift
requirements and facilitates the early deployment of Army heavy
brigade forces, delivers theater-opening CS/CSS forces and port
opening equipment, and provides sustainment stocks for an Area of
Operations. Ideally, the equipment will be operational within
eight days of initial discharge and fully operational with
deployed troops within fifteen days of notification.

WHAT DOES APS-3 LOOK LIKE?

Currently, the heavy brigade afloat consists essentially of
two tank and two mechanized infantry battalions, a self-propelled
artillery and combat engineer battalion, a battery of air defense
artillery, all combat service support, and 15 days of supply to
include ammunition and medical supplies. All of this is loaded
on a fleet of 14 ships.[7] Within four hours of notification,

these ships can be underway from their loiter locations to
predesignated port facilities in Southwest Asia or Northeast
Asia.

Currently, APS-3 carries a total of 870,000 square feet of
cargo. By 2003, APS-3 will have expanded to prepostition
sufficient equipment for two heavy brigades (with all CS/CSS) and
a corps/theater base. This will be loaded onto eight new Large
Medium-Speed Roll On-Roll Off (LMSR) ships: One of them, the USNS
Watson, is already loaded[8]. A list of the Watson's complement of
on-board equipment (Figure 1) offers an appreciation of the size
of this class of ship:

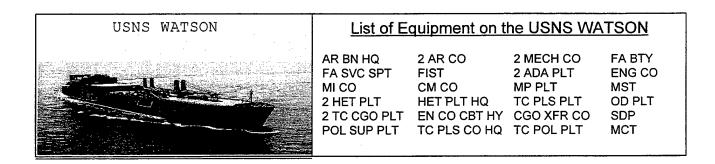| USNS WATSON	List of Equipment on the USNS WATSON			
	AR BN HQ	2 AR CO	2 MECH CO	FA BTY
	FA SVC SPT	FIST	2 ADA PLT	ENG CO
	MI CO	CM CO	MP PLT	MST
	2 HET PLT	HET PLT HQ	TC PLS PLT	OD PLT
	2 TC CGO PLT	EN CO CBT HY	CGO XFR CO	SDP
	POL SUP PLT	TC PLS CO HQ	TC POL PLT	MCT

Figure 1 - USNS Watson with Equipment

These eight new LMSRs—along with two container ships, two
ammunition ships, and one crane ship—will resource the APA
program and provide the Army with two million square feet of
material to support power projection. This fleet, coupled with
11 refurbished LMSRs to provide surge sealift for follow-on

divisions and sustainment, will complete the sealift requirements of the strategic mobility triad out to 2010.[9]

To military strategists who struggle with planning to conduct operations in "two nearly simultaneous major theaters of war"(MTW), the APA program has been a godsend.[10] Such capability is unmatched by any military force in the world. Needless to say, the ability to rapidly project such a large amount of combat power offers a very strong deterrent to potential adversaries.

Simply stated, the Army's Pre-positioned Afloat Program accomplishes in days what took months during Desert Storm, with more than four times the efficiency. Thus it is quite clear that the APA program is here to stay for the foreseeable future. It provides a large part of our military strategy to shape and respond to future conflicts.

Nonetheless, we need to get smarter about not only how this system works but also about the essential things the customer should know about APS-3. Likewise, APS-3 planners need to hear directly from the customer.

WHERE DOES APS-3 NOT MEASURE UP?

Various logistic organizations such as the Deputy Chief of Staff for Logistics (DCSLOG) and Army Material Command (AMC) have made Herculean efforts to plan and execute this program. Indeed the APA program has developed further in three years than the USMC's MPS did in ten. In a few short years the program has evolved dramatically both in size and in capability. These

expert planners' attention to complex detail has been extraordinary. They have developed an unrivaled military capability unparalleled in the history of warfare.

However, the system suffers from a shortfall that can be met only through close coordination between the provider(APS planners) and the actual customer(the warfighter). To work reliably, APS-3 must still meet two formidable challenges: inventory fidelity and unit training. These challenges remain because of one central problem: In the eyes of APS-3 planners, the "warfighter" is exclusively Army Central Command (ARCENT).

While ARCENT does in fact share a command and control relationship with the forces apportioned to the CINC, ARCENT staffers are not the actual warfighters who will draw and use this prepositioned equipment in battle. Only when the actual users exercise this equipment hands-on will we be assured that our warfighters will be able to meet doctrinal standards in their assigned contingency missions.[11]

THE PROOF IS IN THE DETAILS.

As the opening vignette indicates, a terrible fate can befall an unaware commander who has not planned in detail and must rely on prepositioned supplies and equipment. Major Commands (MACOMs) that perform contingency missions know well in advance when readiness cycles will affect their units: *Ninety days out, FORSCOM will notify all concerned commands of the brigade*

*contingency force pool units selected for an APA mission.—FM
100-17-1*

To manage these cycles, MACOMs designate Force Package One
(FP1) and Force Package Two (FP2) units. It is common knowledge
that one of the Force Packages will be strategically airlifted to
equipment which has been pre-positioned, while the follow-on
Force Package will be strategically airlifted to join APS-3 at a
port.

Realizing this, why then do we wait until an alert is called
to begin the process of determining the status of APS-3? All of
the questions raised in the opening vignette could have been
addressed months earlier.

WHAT RIGHT LOOKS LIKE

When units are designated to participate in Intrinsic
Action,[12] they start a six-month journey of pre-coordination
liaison meetings with Army Central Command-Kuwait (ARCENT-K) and
ITT.[13]

Unit logisticians, executive and operations officers, and
even commanders make three trips to APS-5 Kuwait (see Figure 2)
to meet with representatives from every organization which will
in one way or another be involved in their deployment. No detail
is overlooked: Unit commanders and staffs study every phase of
the Reception, Staging, Onward-movement, and Integration (RSOI)
in consummate detail.

They precisely determine availability of vehicles by type, operational readiness rates, status of unit Prescribed Load Lists (PLL), communications, and sets, kits, outfits (SKOs). All of this is discussed in intricate detail. When they return to their units, they know what items to include on the To Accompany Troops (TAT) list in order to complement the equipment awaiting their arrival. A fourth pre-coordination meeting is conducted when ARCENT-K and its representatives travel to visit the unit at its home station to discuss final details and procedures.

So when the unit finally deploys, they truly know what to expect. There are no surprises. The unit quickly draws its equipment and moves to tactical assembly areas in a matter of hours after initial arrival in country.
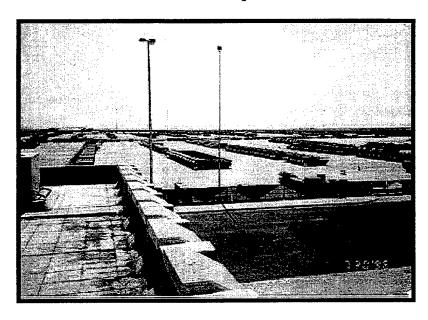

Figure 2 - APS-5 at Camp Doha, Kuwait

The procedure described above for units deploying on Intrinsic Action observe the same template used by units deploying to the National Training Center (NTC). Thus the units have trained in detail the way they will deploy.

PRE-POSITIONED VS PRE-POSITIONED AFLOAT

So we know that units deploying to Kuwait or the NTC have access to a plethora of information about equipment awaiting their deployment months prior to departure from home station. Imagine for a moment conducting the same operation from a cold start, with literally no coordination prior to an "N-Hour" sequence.[14]

Imagine the endless hours needed to draw equipment, sight unseen, without the opportunity to check its status, inventory issue, and level of modernization. Add to this murky equation that, unlike deployments to Doha and the NTC, this is not a routine maneuver, but an entry in a relatively uncharted AO. In fact, the last and only time APS-3 has been exercised was October 1994, when the 3d Brigade Combat Team (BCT) of the 24th Infantry Division (M) (now the 3d Infantry Division (M)) deployed to Southwest Asia as part of Operation Vigilant Warrior.[15] Smaller scale exercises of APS-3 have been conducted since Vigilant Warrior, but not the entire set.[16]

CHALLENGES WITH INVENTORY MANAGEMENT

APS-3 is managed by the Army War Reserve Support Command at Rock Island, Illinois. It is maintained by Combat Equipment

Group-Asia (CEG-A), located at Charleston, SC. CEG-A is responsible for the maintenance of all major end items assigned to the APS-3 inventory, to include all SKOs. CEG-A maintains visibility of these systems with inventory software called Army War Reserve Deployment System (AWRDS).

While AWRDS assists CEG-A in maintaining inventory control of major end items, it has several shortcomings which can critically affect deployment. First, AWRDS loses sight of equipment while it is downloaded off the ship during the 90-day maintenance cycle. This lack of visibility causes problems for APS-3 managers, who vigilantly monitor unit set integrity, an important detail for warfighters. This vigilance came about as lessons learned from Operation Vigilant Warrior.

But problems arise when a combat system is held up in a long-term maintenance delay. Then it will not be available for the reload of the set. Managers and analysts need this kind of visibility so they can draw on other inventories such as inactive warstocks to compensate for the unanticipated shortages within unit sets. Due to the difficulties of conducting maintenance at sea, many of the major maintenance problems are not identified until well into the maintenance cycle.

> In war, nothing is achieved except by calculation.
> Everything that is not soundly planned in its detail
> yields no result.
> —The Maxims of Napoleon

In addition to the questionable ability of AWRDS to monitor major end items during the maintenance cycle, it also does not know when unit sets are spread over several ships. AWRDS monitors only like-unit sets. When a task organized unit is stowed on several ships, it becomes very difficult for the commander to identify his equipment. In effect, he does not know what is where.

This is especially true for Combat Support (CS) and Combat Service Support (CSS) units, because the various support elements are task organized with units.[17] Depending on the nature of support, it is not uncommon to find a CSS unit's equipment spread across six ships. However, AWRDS only pinpoints asset visibility on a given ship. It does not indicate which other ship may be carrying like-unit equipment. This can be determined only through surveying the inventory of other ships until the entire unit is accounted for.

Another shortcoming of the inventory management system is that, while it accounts for SKOs, it does not provide detailed asset resolution for items within these SKOs. For example, the large tool set used by unit maintenance (the #1 Common) consists of a five ton truckload of special tools and equipment which are essential to conduct maintenance, such as diagnostics and removal of major components.

UNIT TRAINING AND PRIOR COORDINATION IS KEY

Prior coordination between warfighting units and APS-managers can identify actual inventory shortcomings and allow warfighters to adjust their TAT requirements with their own home-station equipment. The same is true for other issues such as Authorized Stockage Levels (ASL) and Prescribed Load Lists (PLL). Through prior coordination, units can identify ASL and PLL zero balance items and, again, add indicated items to their TAT.

Another pre-coordination dividend would yield an appreciation of the level of equipment modernization. APS-3 continues to modernize. For example, the Watson was loaded with M106A6 Paladin 155mm self-propelled Howitzers, the M2A2 Operation Desert Storm (ODS) Bradley Infantry Fighting Vehicle, and the Bradley Stinger Fighting Vehicle (BSFV).[18]

Nonetheless, a latency factor will persist. We know that Force Development/Modernization and changes to unit Tables of Organizational Equipment (TOEs) will continue at a pace that APS-3 cannot not feasibly match. This furious pace, along with the circumstance that APS-3 stocks are updated only during the maintenance cycle (once per 30 months), dramatizes the need to know well in advance what type equipment a unit will draw.

Further, when commanders can be certain of the actual type of equipment they will draw, adjustments can be made in their training forecasts to provide appropriate training up or down,

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depending on their current Modified Table of Organizational Equipment (M-TOE).

One of the most valuable tools currently available to commanders facing these Reception, Staging, Onward Integration (RSOI) challenges is the Automated Battlebook System (ABS), a logistics planning tool that provides the warfighter with a windows-based software application designed to help planners identify APS-3 inventory stocks. This provides important information on the inventory status of the major end items on a given ship. ABS is stored on a compact disc; the Mobile Training Team's (MTT) [19] primary activity is to teach the proper use of this software. Yet at this very moment most units do not have computers with sufficiently robust processors and memories to operate this valuable CD.[20] However, the ABS database remains only as good as the input it receives from AWRDS.

The foregoing detail is necessary for a commander to determine the difference between the ship's inventory and that of his current M-TOE. With this knowledge, he can develop his TAT requirements. In addition, most commanders are unaware that there are a host of items which are "Not Authorized for Pre-positioning" (NAP). Consider this list:

1. Aircraft, aircraft subsystems, and avionics.

2. Organizational clothing, such as sized items, and equipment.

3. Protective masks.

4. Individual weapons.

5. Classified items such as COMSEC equipment.

6. Selected high-dollar communications equipment.

7. Binoculars, cameras, and watches.

8. Selected office machines, ADP equipment, and
   administrative items.

10. Selected night vision devices.

11. Missiles and missile ground support equipment.

12. Highly pilferable, high-cost, low-weight items.

13. Items required to be in the hands of troops on arrival.

14. Items that are an integral part of a system that

has another LIN excluded.[21]

CONCLUSION AND RECOMMENDATIONS

A great deal of work is already underway to address some of

the problems identified in this paper. For example, APS-3

managers recognize problems with the inventory system and are

looking at ways to correct it.[22] Further, 7th Transportation Group

of Ft. Eustis, VA. has coordinated with CEG-A to start a program

to assist CEG-A in the maintenance downloading of APS-3 ships at

Charleston.[23] Thus they will be training in their wartime mission

of downloading ships and preparing equipment for issue.

Several programs are available to assist commanders in the

planning and preparation for an APS-3 deployment, such as the APA

Mobile Training Team (APA MTT). This team was to visit

identified units at the beginning of their APA training cycle,

ninety days out.[24] Indeed the APA MTT concept is precisly what we need, as its curriculum indicates:

- In-brief the entire chain of command, to include the support structure (corps, division, installation, brigade, and CSS commanders and staffs), to give all participants an overview of the program, establish relationships, and assign responsibilities.

- Provide updated APA ship battle book data, to include complete equipment lists, current maintenance status of equipment and supplies aboard APA ships, review of load plans, and identification of any force modernization issues.

- Establish an initial equipment transfer plan.(Ship to Staging Area)

- Conduct an intensive training session on Off-load Pre-positioned Party (OPP) requirements, procedures for discharge, and accountability transfer.

- Inform the brigade of source intelligence equipment required for linkages within theater if it is not already available.

- Perform liaison visits to appropriate commands.

—FM 100-17-1

Unfortunately, because of budget cuts MTT visits have been curtailed; currently, they are no longer funded at HQDA. This misfortune is in part due to the initial assumption that MTT would be a one-time event per division. But this assumption failed to take into account personnel turbulence and a lack of

any institutionalized training from TRADOC to sustain the valuable skills taught by the MTT.[25]

Currently, the MTT funding burden has fallen on FORSCOM, which continues to struggle to make funding available for this program. Attempts to conduct this training through Distance Learning and Education using video teleconference has yet to prove its utility to either party.[26] All of this muddling has prompted much discussion about whether or not such training is even necessary.

Consequently, APA MTT has been tied up in a who-is-responsible, who-will-task, and who-will-pay bureaucratic cycle.[27] Efforts to get the APA MTT back to the units that need the training are on-going. However, the program needs to be formalized and endorsed by CINC-level commanders if it is going to serve its important purpose. The bottom line is that the one critical link between APS managers and warfighting commanders is the APA MTT. This link will help transform the wholesale system we currently have to a more customer-oriented retail system.

The APA MTT program detailed in FM 100-17-1 is sound. But a word of caution is in order: the APA MTT will be only as good as the level of attention it is given by commanders and the timeliness of the training itself. Conducting this valuable training during an "N-hour" sequence is too late. It must be adequately resourced and planned well in advance on a unit's long-range training calendar. Ideally, APS-3 training and its

integration in RSOI should be on the agenda at Semi Annual Training Briefs (SATB). Further, it should be added as a battle task as part of the battlestaff's Mission Essential Task List (METL).

An appendix in FM 100-17-1 (Commander's Guide to Deployment Operations) provides a detailed list of everything a commander needs to consider when planning for APA operations. Incredibly, a surprising number of warfighters and logisticians, in fact, have never seen or heard of the FM 100-17 series of manuals. This oversight is in part because APS-3 is not being taught as a system of power projection in our TRADOC schools. The resulting unfamiliarity with the doctrinal manuals which govern this important program haunts lieutenants and young NCOs graduating from our TRADOC school system. They are arriving at their respective units not knowing what APS is, totally ignorant of its critical role in the nation's Strategic Mobility Triad.

Most of our Army can still remember the POMCUS INSPECTION RECONNAISSANCE PROGRAM (PIRP), which was a required activity in a unit's planning timeline prior to any REFORGER Exercise.[28] Simply stated, we need to begin conducting such PIRPs on APS-3 routinely. APS-3 can only get better with more involvement from the warfighter perspective.

Other opportunities also need to be explored to maintain the readiness of the APS-3 program. For example, the need to exercise the equipment cannot be overstated. Planners must

identify opportunities when a download of the equipment can be incorporated into a Sea Emergency Readiness Exercise (SEDRE) so both the equipment and the unit get exercised.

Other training and readiness options could include a rotation of the APA fleet with existing pre-positioned fleets such as the one at Doha or even the fleet at the NTC. Both of these fleets are approaching over-use and could well use a maintenance cycle.[29]

Another opportunity to increase the readiness of units would be to publish lessons learned by CEG-A personnel as they begin the download of the first equipment set which has been at sea for over thirty months.

Currently the warfighting community has lost its vote. As the primary customer, commanders must have a voice in the management of the equipment which their soldiers will use in combat.

ARCENT can provide APA managers with valuable data about characteristics of the Area of Operations and force integration requirements focused at the operational level. However, tactical equipment issues are better fielded at the division level, where the degree of fidelity required for warfighting commanders to plan for a "come as you are" conflict is most assured.

APS-3 can only get better as the warfighter trains with it and learns how to know its status realtime, in total detail. Coordination between the supplier and user must begin at the CINC level, from which time and resources should be allocated to

assure the success of this valuable program. We know what right looks like already. Now we must make APS-3 look right to the warfighting commander and work right for the warfighting soldier who ultimately depends on it.

Word count: 5074

ENDNOTES

[1] White House, A National Security Strategy for a New Century, (Washington D.C: The White House, May 1997), p. i.

[2] The date at which a unit begins deployment is referred to as "C" day.

[3] The MPF can not conduct forced entry as a stand-alone force, but in concert with an amphibious assault operation. The MPF provides the CINC a force enabler to exploit a forced entry operation.

[4] This habitual relationship with each MPF offers other benefits as well. MPFs are exercised in a different CINC's AOR each year by deploying designated units to link-up and download their respective MPF. Many of these downloads are conducted "in stream" which is an off-shore unload onto shuttle craft or by causeway. In addition, units also take part in the MPF's scheduled maintenance cycle when it is conducted at Blount Island, FL. LTC Jim Schindler, USMC, U.S.Marine Corps Combat Development Command, Quantico, Virginia. Interview by author 15 December 1998.

[5] Army Pre-Positioned Stocks (APS) Afloat (APS-3) rapidly provides a heavy brigade of two tank and two mech battalions(2X2) with a support slice and sustainment supplies to a combatant CINC anywhere in the world; however, it "belongs' to no CINC as it is recognized as a "swing stock" maintained in a combat ready condition by Army Material Command (AMC). Additionally, it provides a force support package, watercraft and other equipment to provide early port opening in an area where insufficient port facilities exist. APS-3 also can provide early entry equipment into a area when used in Military Operations Other Than War (MOOTW) through selected discharge of embarked equipment and supplies. Dr. Derek Povah, Plans and Operations Branch, Power Projection Logistics Division, Deputy Chief of Staff for Logistics at Army Forces Command. Derek Povah povahderek@forscom.army.mil "APS-3" electronic mail message to tuckerm@awc.carlisle.army.mil, 12 December 1998.

[6] FM 100-17-1 Army Pre-Positioned Afloat Operations July 1996, p. iv.

[7] Richards, Kim A. "Prepo Afloat: Key to Power Projection." Army Logistician, January-February 1998, p. 24-26.

[8] Interview with Mr. B. White of the US Army Logistics Integration Agency (USALIA), 23 November 1998.

[9] 3.5 Billion has been budgeted for FY 00-05, with an annual requirement of 575 million per year. Interview with Mr. J. Kern, Army War Reserve Division, Deputy Chief of Staff for Logistics(DCSLOG), the Pentagon, 5 November, 1998.

[10] "Our military must be able to transition to fighting major theater wars from a posture of global engagement—from substantial levels of peacetime engagement overseas as well as multiple concurrent smaller-scale contingencies." The White House, A National Security For A New Century. October 1998. P. 22.

[11] Exercising APS-3 is a very expensive venture. Coupled with the increased demand on APS-3 in real-world scenarios (Desert Thunder-Feb '98, and Desert Fox-Dec '98). The next scheduled exercise of APS-3 is planned with the deployment of troops for CENTCOM's EXERCISE BRIGHT STAR '99. However, the download of APS-3 may get scaled back, if not canceled. Kern, John H.kernjh@HQDA.ARMY.MIL. "APS-3 Exercises" electronic mail to LTC Michael S. Tucker tuckerm@awc.carlisle.army.mil, 16 December 1998.

[12] Intrinsic Action is a name given to an ongoing series of USCENTCOM exercises in which a U.S. Army armor or mechanized battalion task force trains in Kuwait using portions of APS-5, a prepositioned heavy brigade set of equipment maintained at Camp Doha, Kuwait.

[13] ITT is a civilian contractor who maintains APS-5 at Camp Doha, Kuwait. ITT at one time stood for International Telephone and Telegraph. The company has since diversified into many other contracts and dropped the title "International Telephone and Telegraph" but kept "ITT" as their logo.

[14] The term "N-Hour" sequence refers to the time at which a unit is officially notified of a deployment.

[15] Wark, Lawrence J. "Army War Reserve-3: Pre-positoned Equipment Afloat." Infantry, March-April 1996, p. 7

[16] A company of equipment was unloaded from the Cape Horn in the United Arab Emirates(UAE)during CENTCOM EXERCISE IRON FALCON in March-April 1996. In 1997 the American Cormorant was off-loaded as part of EXERCISE BIG RED, and the Gopher State participated in a 1998 exercise. These latter two ships contain

port opening equipment and do not involve linking-up with large troop units. Kern, John H.<u>kernjh@HQDA.ARMY.MIL</u>. "APS-3 Exercises" electronic mail to LTC Michael S. Tucker <u>tuckerm@awc.carlisle.army.mil</u>, 16 December 1998.

[17] These elements are commonly called "habitual slice elements" which come in the form of a Fire Support Element, Maintenance Support Team, Combat Engineers, and an Air Defense Platoon. All of these elements belong to parent battalions within the division structure.

[18] The Watson will carry the most modern of all equipment currently afloat. This also includes 48 each M1000s/M1070s in support of two Heavy Equipment Transport platoons. Extracted from Briefing by USALIA, at Defense Distribution Region East, 5 November, 1998.

[19] On 15 May 1995, HQDA (DAMO-ZA) announced the establishment and assigned responsibilities for the APS-3 (Afloat) Mobile Training Team (MTT). HQDA provided tasking authority for manning the TRADOC MTT and funds for the MTT through the Army Strategic Mobility Program (ASMP).

[20] The current 2.4 version (non-beta) of ABS requires 650 megabits of hard drive space to operate. Even the newest beta version (3.0) requires 450 megabits. Efforts are currently underway to "package" unit CDs as they only need to view the APS set they are earmarked for. While still in its beta version, ABS 3.0 provides a far better interface with unit hand receipt files than its predecessor, version 2.4. Scott Wessinger, Functional Lead for ABS Software Development, Stanley Associates, Atlanta, Georgia. Interviewed by author 16 December 1998.

[21] Interim change to Chapter 6, AR 710-1 Centralized Inventory Management of the Army Supply System for Army War Reserve. Dated 10 June 1997. P. 13

[22] Per phone interview with Scott Wessinger of Stanley Corporation on 16 December 1998, a 3.0 ABS beta version has been developed to correct most of the database software problems identified in this paper. This beta version was demonstrated during a recent MTT visit to 3d Infantry Division (Mech) in November 1998.

[23] 7th Trans Group is the unit responsible for performing the Logistic Support Element (LSE) and Port Support Activity (PSA) functions in support of APS-3.

[24] FM 100-17-1. P. A1.

[25] Leadership at DCSLOG made the funding cut decision based on the training being a continuous FORSCOM mission requirement. However, according to Mr. Kern, Deputy, War Reserve Division, Office of the Deputy Chief of Staff for Logistics, FORSCOM AO's have been told to submit funding for MTT in the next POM. Kern, John H.kernjh@HQDA.ARMY.MIL. "APS-3 Exercises" electronic mail to LTC Michael S. Tucker tuckerm@awc.carlisle.army.mil, 16 December 1998. Currently a cost model for a MTT visit to a unit is $10K. During the recent MTT to 3ID(M), FORSCOM used contingency funds to finance the visit. Kral, Anthony H.krala@emh5.stewart.army.mil "APS-3" electronic mail to tuckerm@awc.carlisle.army.mil, 30 November 1998.

[26] The first distance learning workshops took place 21-23 September 1998 at Ft. Hood, Texas over the T-Net. Results were minimal. Distance learning approach does not support the initial ABS hands-on portion of instruction. Technical difficulties were experienced causing considerable loss of instruction time. Student turnout was low. All too often such training, if not placed on the unit's long range calendar, will not receive proper resourcing and emphasis. This is especially true if the training has not been endorsed by senior leaders. Derek Povah povahderek@forscom.army.mil "APS-3" electronic mail message to tuckerm@awc.carlisle.army.mil, 16 December 1998.

[27] Derek Povah povahderek@forscom.army.mil, "APS-3 First Distance Learning Via Tele-Net from Ft. Eustis to Ft. Hood, 21-24 September 98 – AFTER ACTION REPORT" electronic mail message to Joseph Nesbitt NesbiJG@hqda.army.mil, 01 October, 1998. and Derek Povah povahderek@forscom.army.mil, "ABS Training for 3ID during Nov 98" electronic mail message to Overbey, CPT Gerard J., 05 October, 1998.

[28]The PIRP "pie-rep" was conducted by advance parties months prior to any REFORGER exercise. The intent was for units to pre-inspect equipment which they would draw in the months ahead and receive briefings on their unit's equipment issue.

[29] USCENTCOM's Intrinsic Action used to be a 60 day exercise conducted two-three times a year which allowed for maintenance downtime. Since April 1996, unit participation on Intrinsic Action has been continuous with units rotating every four months, thus leaving little to no maintenance downtime. APS-5 is now approaching the same maintenance challenges the NTC has experienced with its "Blue and Gold" fleet; one fleet has to be used to replace the Non-Mission Capable (NMC) vehicles in the fleet being issued. Over time this practice causes two fleets to

be maintained to meet the recurring demands of having one fleet always deployed (issued to units).

BIBLIOGRAPHY

Aspin, Les, , <u>Report on the Bottom-Up Review</u>. U.S. Department of
    Defense.Washington, D.C.: U.S. Department of Defense, October
    1993.

Chilcoat, Robert, and Henderson, David., "Army Prepositioning
    Afloat." <u>Joint Forces Quarterly</u>, Spring 1994. 51-56.

Curl, William, "The Army Pre-Position Afloat Program: Is it a
    Program We Need?" <u>U.S. Army War College Strategic Research
    Project</u>. Carlisle, PA. April, 1998.

Department of Defense, <u>Report of the Quadrennial Defense Review</u>,
    Department of Defense, May 1997.

Department of the Army, <u>Army Pre-Positioned Afloat Operations</u>,
    Field Manual 100-17-1. Washington, D.C.: U.S. Department of
    the Army, July 1996.

Department of the Army, <u>Centralized Inventory Management of the
    Army Supply System</u>, Army Regulation 710-1 Chapter 6, Army War
    Reserve Policy Guidance (Draft). (Washington, D.C.:U.S.
    Department of the Army, 07 January 1997.

Dille, Mark, "Improving our Strategic Mobility Posture for the
    XXI Century." <u>U.S. Army War College Strategic Research
    Project</u>. Carlisle, PA. April, 1996.

Faver, Dennis, "Forty Years of Strategic Mobility, an interview
    with LTG(R)Edward Honor." <u>U.S. Army War College Strategic
    Research Project</u>. Carlisle, PA. April, 1998.

Ferguson, Gerald E., "Deployment of Heavy Forces in Two Nearly
    Simultaneous Major Regional Conflicts: Can We Meet the
    Requirements?" <u>U.S. Army War College Strategic Research
    Project</u>. Carlisle, PA. April, 1998.

Hagen, Harold, "Strategic Sealift Funding Policy: Will it Keep or
    Defense Policy Afloat?" <u>U.S. Army War College Strategic
    Research Project</u>. Carlisle, PA. April, 1993.

Harold, Brent and Sims, Marc and McNeely, Bob., "Operation Desert
    Shield: Logistic Considerations for Sustained Deployment."
    <u>Logistics Spectrum</u>, Vol 25, Issue 1, Spring 1991. 5-9.

Leonard, Steven M., "Falling in on War Reserves." <u>Army
    Logistician</u>, (Jan-Feb 1997). 6-11.

Ludwig, Harry, Field Service Representative of U.S. Army Logistical Integration Agency, <u>Mission Briefing of the Logistical Integration Agency</u> presented to

Martin, Joseph Jr. "The Maritime Pre-Positioning Programs: A Combat Commander's Force Equalizer and Logistical Lifeblood." <u>United States Naval War College</u>, Newport, RI. May 1996.

Maschek, Randall, "Jointness in the Army & Marine Corps Prepositioned Maintenance Afloat Program." <u>U.S. Army War College Strategic Research Project</u>. Carlisle, PA. April, 1996.

Mears, Gary and Kim, Ted, "Logistics: The Way Ahead." <u>Joint Forces Quarterly</u>, Spring 1994. 38-44.

Miller, David, "Anywhere-Anytime: Rapid Deployment Forces and Their Future." <u>International Defense Review</u>. October 1994. 14-17.

Minor, John, Field Service Representative of the U.S. Army War Reserve Command Material Management Division, <u>Status Report</u> briefing to representatives of U.S. Army War Reserve Support Command, and U.S. Army Deputy Chief of Staff for Logistics War Reserve Division, 5 November, 1998, Cumberland Army Depot, PA.

Peay, J,H. "Building America's Power-Projection Army." <u>Military Review.</u> July 1994. 4-15.

Phelps, Angela, "Strategic Mobility." <u>Army Logistician</u>. May-June 1996. 26-28.

Reuss, Gregory, "Son of Maritime Prepostioning Force." <u>U.S. Army War College Strategic Research Project</u>. Carlisle, PA. April, 1996.

Richards, Kim. "Prepo-Afloat: Key to Power Projection." <u>Logistician</u> (Jan-Feb 1998): 24-26.

Roos, John G., "Power-Projection Logistics: Army's Get Well Remedy Promises Little Relief for Near-Term Maladies." <u>Armed Forces Journal</u>. August 1997. 45-49.

Roos, John G. , "The Power of Prepo." <u>Armed Forces Journal</u>, June 1995. 28-30.

Second Brigade, Third Infantry Division(Mechanized). <u>APS-3 Lessons Learned</u> 6 August 1998.

Shelton, Henery H. Title. Posture Statement presented to the 105th Congress, Senate Armed Services Committee, United States Senate. Washington, D.C.:U.S. Department of Defense, 3 Feburary 1998.

Shrader, Charles, R., "A Century of Power Projection, 1898-1998." Association of the United States Army Land Power Essay, July 1998.

Sullivan, Gordon R., "Power Projection and the Challenges of Regionalism." Parameters 23 (Spring 1993): 2-15.

Thompson, Tom, "Mobility Requirements Studies: Time for a New Approach." U.S. Army War College Strategic Research Project. Carlisle, PA. April, 1997.

Townsend, Robert, "Dominant Maneuver: Strategic Mobility in the 21st Century." U.S. Army War College Strategic Research Project. Carlisle, PA. April, 1998.

U.S. Army War College, Communicative Arts Program Directive, AY98. Carlisle Barracks: U. S. Army War College, 1997.

U.S. General Accounting Office, Afloat Pre-Positioning: Not All Equipment Meets the Army's Readiness Goal. Washington, D.C.: U.S. General Accounting Office, July, 1997.

U.S. General Accounting Office, Military Afloat Pre-Positioning: Wartime Use and Issues for the Future. Washington, D.C.: U.S. General Accounting Office, November 1992.

U.S. General Accounting Office, Strategic Mobility: Late Deliveries of Large, Medium-Speed Roll-On, Roll-Off Ships. Washington, D.C.: U.S. General Accounting Office, June 1997.

Wark, Lawrence J. "Army War Reserve-3 Pre-Positioned Equipment Afloat." Infantry (Mar-Apr 1996). 7-9.

White, Bobby, Field Service Representative of U.S. Army Logistical Integration Agency, Interview by author, 23 November 1998, Cumberland Army Depot, PA.

Wilson, Johnnie, "Power-Projection Logistics Now… and in the 21st Century." Association of the United States Army Green Book, 199X. 134-143.